

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of displaying embedded firmware program information, comprising:
 - displaying a first screen to interact with a user for high level function selections;
 - displaying a second screen to show hardware resources for a programmable circuit;
 - displaying a third screen to show source code for a plurality of source code programs to control the programmable circuit; and
 - displaying a fourth screen to render symbolic information associated with the displayed source code, the symbolic information comprising:
 - code labels, data labels referring to data structures comprising fields, data register names, and index register names;
 - address locations for the code labels and the data labels; and
 - listings including named registers, data labels for word, byte and short entities, and names of the data structures,

wherein the data structures and the fields of the data structures are individually
expandable to show respective addresses and values of the word containing a start of the field.

2. (Previously Presented) The method according to claim 1, further including displaying source code associated with a symbol in the fourth screen selected by the user.

3. (Previously Presented) The method according to claim 2, further including displaying a view source button in the fourth screen configured to be activated by a computer mouse to view source code associated with the symbol.

Claim 4 (Cancelled)

5. (Previously Presented) The method according to claim 1, further including displaying the symbolic information in the fourth screen without typing by the user.

Claim 6 (Cancelled)

7. (Original) The method according to claim 1, further including displaying a device enabling expansion of the displayed symbolic information.

Claim 8 (Cancelled)

9. (Previously Presented) The method according to claim 1, further including parsing the source code to create the listings in the fourth screen.

10. (Original) The method according to claim 9, further including outputting symbolic information for a data structure recursively until resultant fields are no longer structures.

11. (Original) The method according to claim 1, further including displaying the symbolic information for particular regions of the source code.

12. (Previously Presented) The method according to claim 1, wherein the programmable circuit includes a processor.

13. (Currently Amended) An embedded firmware development system, comprising:
a control module to control the system;
a device interface module coupled to the control module to communicate with a device to be programmed by the system;
an assembler module coupled to the control module to assemble source code;
a main module coupled to the control module to display a high-level function screen;
a source module coupled to the control module to display source code for at least two firmware programs;

a hardware resource module coupled to the control module to display hardware resources associated with the device to be programmed; and

a speedbar module coupled to the control module to display symbolic information associated with the source code in one screen, the symbolic information comprising:

code labels, data labels referring to data structures comprising fields, data register names, and index register names;

address locations for the code labels and the data labels; and

listings including named registers, data labels for word, byte and short entities, and names of the data structures,

wherein the data structures and the fields of the data structures are individually expandable to show respective addresses and values of the word containing a start of the field.

Claim 14 (Cancelled)

15. (Previously Presented) The system according to claim 13, wherein the device includes a processor.

16. (Currently Amended) An article comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

displaying a first screen to interact with a user for high level function selections;

displaying a second screen to show hardware resources for a programmable circuit;

displaying a third screen to show source code for a plurality of source code programs to control the programmable circuit;

displaying a fourth screen to show symbolic information associated with the displayed source code, the symbolic information comprising:

code labels, data labels referring to data structures comprising fields, data register names, and index register names;

address locations for the code labels and the data labels; and

listings including named registers, data labels for word, byte and short entities, and names of the data structures ~~individually expandable to show addresses and values~~;

parsing the source code to create the listings in the fourth screen; and

outputting symbolic information for a data structure recursively until resultant fields are no longer structures,

wherein the data structures and the fields of the data structures are individually expandable to show respective addresses and values of the word containing a start of the field.

17. (Original) The article according to claim 16, further including displaying source code selected by the user.

18. (Previously Presented) The article according to claim 16, further including displaying the source code in the fourth screen selected by the user by clicking on a view source button.

Claim 19 (Cancelled)

20. (Previously Presented) The article according to claim 16, further including displaying the symbolic information in the fourth screen without typing by the user.

Claims 21 to 23 (Cancelled)

24. (Previously Presented) The article according to claim 16, further including displaying the symbolic information for particular regions of the source code in the fourth screen.

25. (New) The method of claim 1 wherein the data structures and the fields of the data structures are individually expandable comprises the data structures and the fields of the data structures being configured to be expandable by a user using a user interface.

26. (New) The method of claim 25 wherein the data structures and the fields of the data structures are configured to be individually collapsible after being expanded by a user using a user interface.

27. (New) The method of claim 25 wherein the user interface is a mouse interface.

28. (New) The system of claim 13 wherein the data structures and the fields of the data structures are individually expandable comprises the data structures and the fields of the data structures being configured to be expandable by a user using a user interface.

29. (New) The system of claim 28 wherein the data structures and the fields of the data structures are configured to be individually collapsible after being expanded by a user using a user interface.

30. (New) The system of claim 28 wherein the user interface is a mouse interface.

31. (New) The article of claim 16 wherein the data structures and the fields of the data structures are individually expandable comprises the data structures and the fields of the data structures being configured to be expandable by a user using a user interface.

32. (New) The article of claim 31 wherein the data structures and the fields of the data structures are configured to be individually collapsible after being expanded by a user using a user interface.